"COMMERCE & INDUSTRIES"

(LARGEST CIRCULATION IN INDIA.)

Vol. V. No. 10. Price As. 6.	Madras, May 16th, 1922	Post Box No. 24. Telephone No. 831.

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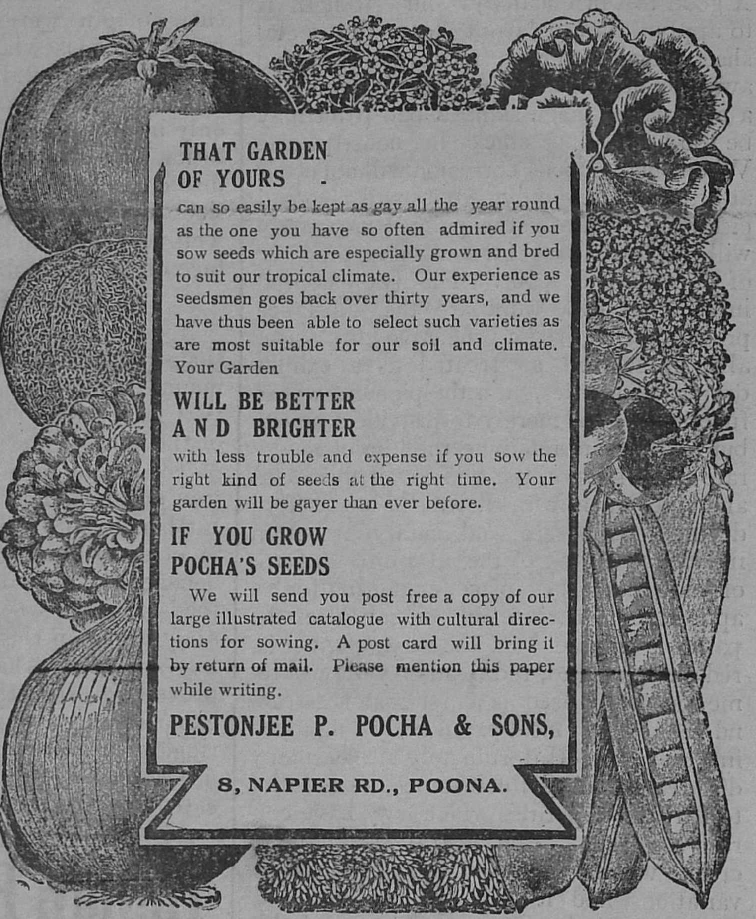

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FORTNIGHTLY REVIEW

Editor : Mr. G. NARASIMHAM.

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NOTICE TO CORRESPONDENTS

The Editor invites Secretaries and Managing Directors of Joint Stock companies and other correspondents to send him their periodical Reports and Balance Sheets and other communications early in the month in order to insure insertion in the following number; but he does not undertake to publish unauthenticated communications, or to return such that are rejected. Contributions are also invited from businessmen and others upon current matters affecting, directly or indirectly, commercial, and industrial interests. Letters from Correspondents seeking information or making suggestions and Enquiries from merchants, manufacturers and others will receive attention.

INDIAN FISCAL COMMISSION.

MR. MANUBHAI N. MEHTA, Dewan of Baroda, representing thirty-two Indian States, and the Hon. Mr. Lalubhai Samaldas, member of the Council of State, were among the two witnesses examined by the Fiscal Commission at its sitting at Bombay.

Both witnesses strongly advocated a policy of discriminate protection and the encouragement of Indian infant industries. Mr. Manubhai, in his written statement, discussed at great length the policy of the allocation of customs revenue and the claim of the State to have a due share in the customs revenue.

The President ruled this out of order as not falling within the field of the enquiry of the Commission.

Mr. Manubhai then referred to the condition of industries in India and said that industries which at one time had attained a high degree of excellence were withering owing to the free and unfettered competition of foreign countries, and the only effect of foreign trade was to drain away most of the raw products to foreign manufacturing countries, to deplete the natural resources of the country and perpetuate its subservience. While admitting that protection would not prove an unmixed blessing for all the ills that India was suffering from, that it was often dishonest and encouraged corruption and intrigue, witness thought that a scientifically reconstructed tariff—a tariff revised from time to time according to the changing exigencies of trade and industries, and a tariff shaped by a truly representative home board with complete fiscal independence and with a sole eye for the advancement of the true interests of the country—could alone be beyond the shadow of reproach of self-interest.

Witness said that a selection might be made for the protection of only such industries for which there was an abundance of raw material, a plentiful supply of skilled labour and a sufficiency of capital for its development. Witness complained that the identity of fiscal interests in the industrial advancement of the country between Indian rulers and the Britith Government had not been made sufficiently manifest in the constitution of the Fiscal Commission.

Replying to Mr. Seshagiri Iyer, witness admitted that there was no reason for any differentiation between the people of British India and the people of British Indian States. He said that India States were regarded as foreign territories by the Indian Government, and instanced the case of the manufacture and export of spirits, for which they had to pay duty twice over. He also complained of the policy of local Governments in refusing to take in any spirits manufactured in Indian States.

Fostering Indian Industries.

Mr. Lalubhai Samaldas urged that the time had arrived to take up in earnest the work of systematically fostering the growth of industries in such a way that India might, in the future, be able to produce and manufacture all articles needed by her. He thought that protection, by itself, could not achieve the end. What was required in addition to protection, wherever necessary, was to take up the work of preliminary investigation regarding the establishment and development of key industries (in which he included the iron and steel industry), to suggest the best methods of helping existing industries and starting new industries by (1) the provision of technological institutes and technical schools, (2) extending the scope and improving the present system of primary education so that unskilled labour may be trained for skilled work, (3) providing railway facilities for carriage of raw material and finished products, (4) providing India with a mercantile marine of her own, (5) opening of Museums and holding of Exhibitions to bring the manufacturer into direct touch with the Consumer and (6) the starting of consumer's co-operative societies all over the country to do away, as far as possible, with the profiteering carried on by the middleman.

He strongly objected to the imposition of countervailing excise duties on Indian manufactured goods when any customs duty was imposed on foreign goods. In the case of the import of foreign goods which were subsidized by producing countries, witness advocated a countervailing import duty to the same extent in order to grant special protection to home industries. Referring to hand industries, witness said that such industries should be maintained and helped, through the co-operative movement and by starting weavers' societies.

Witness said he did not think that for some time to come, British capitalists would care to start industries in this country to take advantage of protective duties. If after a few years they desired to come, he would not prevent them from doing so, provided at least fifty-one per cent. of the capital was Indian and half the directors were Indians. Also, he was against allowing any other foreign capitalists, including colonials, to start industries, or to get mining concessions in this country. He favoured the creation of a permanent board for examining the claims of various industries and for protecting and for fixing the nature and amount of protection to be granted to each industry.

He was opposed to the idea of Imperial Preference from a purely economical point of view. He did not object to giving preference to any country if there was reciprocity, and, if it was found necessary after proper enquiries, that the granting of such perference was in the interests of this country.

Witness reiterated his feeling that till India had her own mercantile marine, she would not be able to compete with foreign countries on equal terms.

THE COTTON DUTIES

During the sitting of the Indian Fiscal Commission on the 1st March 1922, the President, and some of the other Members observed that the expression used by the Committee of the Indian Merchant's Chamber and Bureau Bombay, in their Memorandum of witten evidence, to the effect that the tariff policy of this country dictated by vested interests in the United Kingdom, stood to the discredit of British Rule in India, was a very strong one to use. Messrs. Purshotamdas Thakordas, N. M. Mazumdar and B.F. Madon have now therefore addressed to the Commission on behalf of the Committee, a fuller statement than was first presented, justifying the expression that had been used of the unfortunate history of the Indian cotton duties.

They go at length into the history of the duties, quoting the protest against them by numerous British administrators and following the policy of various secretaries of state, and say :—

"Thus, the whole history of the imposition of the countervailing excise is, we submit again, one of the most unfortunate and sorry chapters in the administration of the affairs of this country, and the Commission are doubtless aware that it has caused in the Indian mind an acuteness of feeling, which to this day remains violated. We venture to submit once more that had this country been free to determine its own fiscal policy its tariff history would have been very different. Time and again, the Manchester Chamber of Commerce, and at its bidding the Secretary of State for India, have dictated the tariff policy of this country to suit their own interests. That unfortunate chapter is still not closed, for the Indian mind has again been agitated over the steps that are at this very moment being taken by Manchester to urge an enhancement of the excise duty to 10 per cent. or the equalisation of the Import and Excise duties at 6 per cent., steps which this country resents as acts of open hostility to its industrial safety and progress."

WORLD-WIDE WHEAT POOL.

It is reported that plans have been prepared for the formation of a gigantic worldwide co-operative wheat marketing organization, which will eventually control the crops of Canada, the United States and Australia.

Mr. Trethowan, Chairman of the Voluntary Wheat Pool, is going to London *en route* to Canada and the United States to consult with wheat organizations regarding the scheme,

ECONOMICS OF ANCIENT INDIA.

Mr. J. N. Samaddar writes as follows in the course of his article on "Economic Culture as depicted in Valmiki's Ramayana" :—

Agriculture.

The first point which we take up is the question of agriculture the main industry of the people from the Aryan settlement down to the present age. As usual, importance is attached to this matter, here also. The king of the *Ramayana* like the king of the *Mahabharata*, was required to understand three kinds of learning namely, Vedas, Agriculture, and Commerce. And the question asked of Bharata by Rama, whether the agriculturists and the Cowherds found favour in Bharata's sight is not only significant but certainly reminds one of the question which was asked of Yudhisthira by the great saint Narada. The cultivators and cowherds were to enjoy happiness and the king was to secure unto them, what they wished for and remove from them what they did not like. Ayodhya is represented as full of cultivators abounding in paddy and rice, the staple crops of those days as well as of these. The king is represented as boasting of his kingdom abounding in Corn. Villages are described as having ploughed fields on their skirts.

Not only the capital but the kindom of *Kosala* as a whole abounded with corn while the king of *Mithila* is described as engaged in ploughing and finding out Sita, showing significantly the importance of agriculture. A Brahman is seen earning his livelihood by digging the earth with spades and ploughs and evidently no stigma is attached to his action, though with the advance of the society, as in the *Mahabharata* we note how a Brahman's taking to agriculture was condemned—a fact which also seems to prove that the society described in the *Ramayana* was more primitive than that described in the *Mahabharata*.

Arts And Industries.

The age had made sufficient progress so far as the arts were concerned. The artisans enjoyed special privileges and it is on record in the *Ramayana* that some of the higher craftsmen, specially those engaged in the canons of the rituals, the *Silpasastras* enjoyed a very high social status. Similarly those employed in irrigation works and in the preparation of public buildings enjoyed high privileges. Ayodhya was inhabited by all classes of them and they had to be specially entertained. They seemed to have been specially protected and just as we find in the *Mahabharata* and as advocated by *Kautilya*, forts were required to be provided with them. In the interesting list of trade which we get in the *Ramayana* we find mention of vorious classes of artisans along with various other traders who evidently contributed to the welfare of the capital and the king, as well as of the people, along with others who helped in the formation and development of the economic life of the people.

A good number of jewellers, expert and agreeable pot-makers, persons skilled in machinery and the use of weapons ; a band of followers, piercers of objects, dentists, extractors of wine, perfume dealers ; renowned goldsmiths, physicians, wine keepers, incense worshippers ; washermen, weavers, painters, charioteers, bards, eulogists, peasants, makers of ramparts, makers of instruments, artisans, dealers in bell-metal vessels, cultivators, shop-keepers, fruit-sellers, garland makers, planters, experts in brick-works, curd-keepers, and vendors, sellers of meat, dealers in lime, badge makers, cotton-sellers, bow-makers, thread-sellers, experts in the manifold use of weapons, shoe-makers, black-smiths, makers of iron bars and bows, skilful chemists, knowers of past, present and future; brass and copper dealers, barbers and actors. We cannot say definitely whether these constituted the guilds of those days, although it may have been so.

Not only the arts connected with war but in domestic utensils also progress could be noticed. Gold, silver and bell-metal vessels were in use, while vessels made with barnished gold with silver covers, show not only the wealth and luxury of the age but prove also the development of the artisan. Bangles studded with gems, elegant ornaments, garland of well melted gold, and pendants of pure gold typify the improvement in the art of the gold smith referred to in the long list of trades, while cars decked in gold were also not wanting.

Textile Industries.

But if progress had been made in arts, greater advancement had undoubtedly been made in the art of textile industries. Silk dress was very much in demand and figured prominently. This would be evident from some of the instances quoted below. Sita when going to Dandaka wore silk, and even when in Dandaka she appeared in silk.

Indeed, silk dress seems to have been in vogue. On the occasion of the marriage of Sita, Janaka gave among other presents a large quantity of silk dress. The queens of Dasaratha were clothed in silk when they welcomed Sita as a bride, while we find Rama and Sita clad in silk at home and even an ordinary nurse is seen clad in silk dress. Bharata put on a dress of silk when he went out of the capital to meet Rama in the forest. We have mentioned the fact of Ravana's going to Sita clad in silk; we further find him sleeping with a dress of yellowish silk, while after his death he was decked in silk before cremation. Other stuffs were also in evidence. Common cloth was of course in use, along with ordinary linen garments, as well as silver and golden robes, excellent yellow cloth made of golden fibres, while coverlets studded with jewels, were also not rare.

Shepherds were particularly mentioned as residing in the Capital. Woollen stufls were in evidence both in Ayodhya, as well as in Kishkindhya. Woollen sheets were also used along with woollen carpets made of the fleece of the deer, while covered blankets were in evidence as well. Spacious and parti-colored woollen cloth figured in the bed room of Ravana, and other evidences were also not wanting to show the wealth of textile industry.

Commerce

Commerce indicates not only the progress which a nation or a country makes but also the connection which it has with the other countries or nations of the world. As I have already observed the King of the *Ramayana* is enjoined to learn three Kinds of learning namely, Vedas, Agriculture and Commerce. That shows the importance which was attached to Commerce though the list of countries having Commercial connection with Ayodhya does not appear to be very long. Traders however did come from other lands with various kinds of merchandise to Ayodhya, which was also inhabited by merchants of various lands. We also note that opulent traders graced the army of the prince when Rama was proceeding towards the forest but the want of details is due possibly to the fact that the King of Ayodhya possessed only a small territory. Instances are not rare, of persons ranging over the sea, or of merchants trafficking beyond the sea to bring presents to the King. Here we note of course, some paucity of details specially in comparison with the very long list which we find in the *Sabha-Parvam* of the *Mahabharata*.

Great importance has been attached by Prof. Hopkins in his "The Position of the Ruling Caste," to the passage in the *Ramayana* in *Ayodhya Kandam*, "Are thy incomings great and outgoings slender?" He has considered this passage along with other passages in the *Mahabharata* and has observed, "The possibility of the Kingdom's existing without taxation seems specially to irritate the compilers of the epic. They revert to the subject again and again and prove that the king must have wealth ; his army, his happiness, his virtue depend on it. As a robe conceals a woman's nakedness, so does wealth conceal sin ; therefore let him get wealth even if he be so sinful." And he goes on to explain the twelfth book in his own way and says that it means that "let the king tax the people they rule as much as they can ; for poverty is a crime."

It is really unfortunate that so much misconception exists regarding all matters relating to ancient India. Commentators, take up detached passages and I may venture to add, come to hasty conclusions. Prof. Hopkins has himself sometime admitted that in the epic all taxation more than legal was decried. We find that the king was to impose taxes gradually and with mildness. We see how Rama was told that "the sin of that monarch is mighty that taketh—a sixth part of the subject's incomes but doth not protect them as sons." We also find that the king that protected his subjects righteously was entitled to a fourth part of the great religious merit reaped by an ascetic an injunction which was pratically repeated in the *Uttarakandam* that a king who ruled well, enjoyed the sixth part of the merits of his subjects. And therefore it follows that the king who failed to rule well did not enjoy the merits of his subjects.

The idea was that by exacting takes for the subjects but failing to do this duty, the king was robbed of his merits and all sins of his subjects devolved on him. That was a very important consideration in these times when very great importance was paid to rules of religion which decided all the important questions of the day.

(Hindustan Review)

SUGAR

Total Cane and Beet Sugar Production of the World during the year 1921-22.

According to the latest estimates published by Messrs. Willet and Gray the total cane and beet sugar production of the world for the year 1921-22 is placed at 16,582,560 long tons as against 16,590,686 tons in 1920-21 or a decrease of only 8,126 tons over the figure of the last year. The total beet sugar crop this season is estimated at 11,607,060 tons as against a realised production of 11,916,069 tons in the previous season. The total beet sugar production is estimated at 4,975,500 tons as against 4,674,617 tons in the previous season. It will thus be seen that while beet sugar shows an increase of 300,883 tons there is a decrease in cane sugar production by 309,009 tons leaving a net deficit of 8,126 tons this year in the total cane and beat sugar production of the world.

PRODUCTION IN INDIA.

According to the results of the Spinning and weaving in Cotton Mills in India in February 1922 compiled by the Department of Statistics, India, the total quantity of yarn spun during the month amounted to about 56 million lbs. and that of woven goods to 30 million pounds as compared with 55 million and 25 million pounds respectively, in the corresponding month of the preceding year, an increase of 1 per cent in the case of yarn and of 20 per cent. in the case of woven goods.

In the 6 months, September 1921 to February 1922, i.e. the first half of the cotton year 1921—22, the quantity of yarn spun amounted to 350 million lbs. and that of woven goods to 199 million lbs. as against 337 million and 184 million lbs. respectively in the corresponding months of the previous year.

Indian Mills produced 637 million lbs. of yarn and 369 million lbs. of woven goods during the eleven months ending February 1922 as against 604 millions of yarn and 334 millions of waven goods in the corresponding period of 1920—21, showing an increase in the production of both yarn and woven goods.

The exports of yarn by sea from the British India to foreign countries during the 11 months ending February 1922 were nearly 74 million lbs. as against 79 million and 141 million in the corresponding periods of 1920—21 and 1919—20 respectively, showing a decrease in the exports of yarn by sea. This to an indication of the demand of yarn for the purpose of weaving in India.

The production of yarns of Nos. 1 to 25 (course counts), 26 to 40 (medium) and (fine) above 40 in February 1922 amounted to 50,130,000 lbs. 5,497,000 lbs. and 189,000 lbs. respectively against 50,121,000 lbs. 4,907,000 lbs. and 181,000 lbs. respectively in February 1921 thereby showing an increase in production.

The Imports of yarn of course, medium, and fine counts amounted to 560,000 lbs. 2,534,000 lbs. and 576 lbs. respectively in February '22 as against 617,000 lbs. 1,813,000 lbs, and 346,000 lbs. respectively in February 1922 thereby showing an increase in the imports of foreign yarn of higher counts.

In February 1922, Indian Mills produced woven goods of the value of Rs. 448 lakhs as against Rs. 429 lakhs in February 1921. India imported cotton good of the value of Rs. 310 lakhs in February 1922 as against Rs. 5,23 lakhs in February 1921. The excise duty realised on woven goods in February 1922 amounted to Rs. 18 lakhs as against Rs. 14 lakhs in February 1921. In a poor country like India where the textile industry requires protection from foreign competition, the levy of the excise duty on Mill production being a tax on the poor consumer ought to be repealed by the Government.

COTTON SPINDLES AND LOOMS.

1922 STATISTICS.

John Worrall, Limited, of Oldham, have published their "Lancashire Cotton Spinners' and Manufacturers' Directory for 1922." As usual, their analysis of cotton machinery is intersting. The number of spinning and doubling spindle is given as 59,712,303, against 60,053,246 a year ago. With regard to looms the number is given as 799,000, as compared with 790,399 same time last year. During the last 10 years there has not been much change in the amount of cotton machinery in Lancashire but in 1906 the figures were 48,322,684 spindles and 684,811 looms.

Oldham is, of course, the biggest spinning centre, with 17,168,050 spindles, but compared with a year ago there is a decrease of 150,126 spindles. Next comes Bolton, with 7,512,731 spindles an increase since a year ago of 57,208 spindles. The Manchester area has 3,505,918 spindles, an increase of 22,686 spindles sincea year ago. With regard to weaving the largest centre in Burnley, with 110,837 looms an increase of 887 since last year. Blackburn comes next with 95,391 looms an increase of 511. There follows Preston and District, with 73,866 looms, an increase of 2,230; Nelson and district, with 60,746 looms, a decrease of 195; Accrington and district, 40,197 looms, an increase of 1,047 and Darwen, with 40,014 looms, an increase of 1,304 looms.

MOTOR INDUSTRY

America's Gigantic Motor Business.

The French Motor Car Co., Ltd., Calcutta, supply the following particulars regarding the motor industry in America.

The following statistics show the national figures on motor production for the year 1921 in America :—

Cars and trucks	1,680,000
Decrease from 1920 production (per cent.)	24
Cars	1,535,000
Trucks	145,000
Wholesale value of cars and trucks produced	$ 1,222,350,000
Decrease from 1920 wholesale value (per cent)	45
Wholesale value of motor cars produced	1,088,100,000
Wholesale value of motor trucks produced	134,250,000
Average wholesale price motor car 1921	702
,, ,, ,, ,, ,, 1920	897
,, ,, ,, ,, truck 1921	968
,, ,, ,, ,, ,, 1920	1,273
Motor car factories in United States	105
,, Truck factories ,, ,,	140
States in which factories are located	32
Employes engaged in car and truck manufacture	256,000
Automobiles registered in United States (approximately)	10,000,000
Passenger cars	9,000,000
Motor trucks	1,000,000
Cars aud trucks owned by farmers	3,000,000
Passenger cars	2,850,000
Motor trucks	150,000
Farm products hauled by motor transport (tons)	134,400,000
Schools using motor bus transportation for children	12,000
Motor buses in operation	20,000
Organized public motor express lines	1,500
Cities having organized motor bus lines	600
Passengers carried annually by motor car	6,000,000,000
Freight hauled annually by motor truck (tons)	1,280,000,000

The Export Trade.

The motor vehicles and parts exported in 1921 reached a total value of $ 102, 945, 610, according to latest figures available. The following table summarizes export figures to January 1st 1922 :—

Value of motor vehicles and parts exported, including engines and tyres	$102,945,610
Number of motor cars exported	30,639
Value of motor cars exported	$33,712,208
Number of motor trucks exported	7,748
Value of motor trucks exported	$11,457,616
Number of countries to which automobiles were exported during year	114

The growth of the American automobile industry has been remarkable and throughout India wherever one goes there will be found American cars. American firms have been particularly successful in the main in the appointment of their agents, which has naturally assisted sales materially.

EDUCATION TO BE FREE.

By a Firman issued by His Exalted Highness the Nizam all fees are to be abolished in all upper and lower primary schools maintained by the Government or the local funds. All such education is to be henceforth free.

His Exalted Highness Government has not yet come to a decision in regard to compulsion which is inseparable from local option.

ROADS CHEAPER THAN RAILWAYS

Mr. Page, Chairman of the Motor Trade Association, Calcutta, said :—

It is an accepted fact that the prosperity of a community is greatly influenced by transport facilities and therefore, the Government have very good reason to turn their serious attention to motor transport as an alternative to railway transport. It is infinitely cheaper to make roads, or, in many cases, reconstruct existing ones, than to construct a railway. Another great saving effected is rolling stock. Given good roads, the community at large will invariably begin to use them and supply their own motor services and vehicles, Shillong being an excellent example, whereas if you build a railway you find very few outsiders who will contribute their own rolling stock. As the Government cannot budget sufficient for railways at the moment, why not build roads and transport will follow? The necessity of good roads may be very shortly brought home to us if the threatened railway strike extends from Asansol to Calcutta. The military authorities realise the value of motor transport and the N.-W. Frontier has a network of good reads and not railways. It would only be fair that the major portion of the proceeds from an annual tax or petrol tax should be allocated for the making and upkeep of roads.

POSTAL RATES IN JAPAN.

A great deal of resentment has been aroused by the action of the Japanese authorities in doubling the postal charges upon all mail matter for overseas points. Some of the daily papers have entered vigorous protests and correspondents have written in similar strain. There is, indeed, no justification for the increase, and the action of the authorities in this matter cannot be too strongly condemned. They have taken an unfair advantage of the permission granted by the International Postal Union to certain countries to increase their postage rates to offset depreciation in currency; but Japan's currency has not depreciated, and the authorities concerned are therefore guilty of sharp practice in levying a one hundred per cent. increase on all foreign mail. It is not only an unjust imposition; it is unwise from an economic standpoint.

THE AGE OF PETROL.

Fifteen years ago in Bombay there were 432 motor cars. There are now 10,288 motor cars, 2,458 motor cycles, and over five hundred motor lorries. Fifteen years ago a drive in any of the principal thoroughfares of the city was a pleasure; to-day it is more in the nature of a penance. Travel of any kind has lost nearly all its pleasure. It is either a means to an end or a necessity.

GERMAN TRADE.

It is reported that German Trade propaganda is very active in China and German goods were offered at ridiculously low prices with a view to capture the market in Chefoo. The slump in the German mark has adversely affected Indian exports to Germany and therefore affected the value of the Rupee.

BANK RATE.

The Imperial Bank of India raised its rate of discount on the 15th December last from 5 per cent. at which it stoor since June 2 of last year to 6 per cent. and on December 29 it was further advanced to 7 per cent. the Bank of England rate is 4 per cent.

"COMMERCE & INDUSTRIES"

MADRAS, 16th MAY 1922

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INDIAN INDUSTRIAL AND COMMERCIAL CONGRESS.

IT was in 1918 that the Indian Industrial Conference which rendered valuable service to the cause of the Indian Industrial development was almalgamated with the Indian Commercial Congress under the name of the "Indian Industrial and Commercial Congress," the main object of this amalgamation being to unite their resources both financial and physical and to work for the common cause by focussing Indian public opinion in all matters concerning Commerce and Industries of India. The first and so far the only session of this new organisation was held in Bombay in January 1920 when it was decided to hold the next session in Madras. Even during the very first session of the Congress, Madras took very little interest, having been represented by only 3 delegates for the whole of the Southern India. It is now full two years and the proposal to hold the second session is still in the air. One thing is certain that Madras has failed to take an active interest in this matter and some other city in India must come forward to revive the sessions of this most important and vital organisation. We must record our deep regret that, owing to the inability and indifference of Madras in organising power, the whole of the Southern India has lost not only a rare honour but also a unique opportunity of receiving the benefits of the valuable knowledge and education conferred on the people by the deliberations of this Congress. We must acknowledge to the credit of Bombay that the success of the Bombay sessions was entirely due to the wonderful driving force of that energetic and capable organisor Mr. J. K. Mehta, M.A., the Secretary of the Indian Merchants' Chamber and Bureau, Bombay.

The urgent need for a Central Institution like this congress is so great that the consideration of many important public questions affecting the Indian interests such as Currency and Exchange, Railway administration, Purchase of stores by Government and the development of key industries in relation there to, Protection of the indegenous industries, Development of Indian shipping and Technical Training for Indians etc. has been put off unduly long.

Immediate steps should therefore be taken by responsible Indians throughout the country to hold the next sessions with the least possible delay. The holding of the Annual Sessions in some corner of India alone will not help much in protecting the Indian industrial and commercial intersts. India is badly in need of a Permanent Central Organisation to watch her interests by continued activities throughout the year whereby to push forward her indigenous enterprises in industry and trade. Such an institution can be no other than the Indian Industrial and Commercial Congress in which all the Chambers of Commerce and allied organisations shall take part by joining as members.

We hope that every Indian having the cause of the economic progress of the country at heart will contribute to the success of the next sessions which is shortly to be held.

CARNATIC PAPER MILLS Ltd.

From the Joint Managing Director's letter dated 1st April 1922 published in the *Krishnapatrica* (Masulipatam), it appears that a special general meeting will shortly be convened to raise the capital to Rs. 20 lakhs to enable the company to manufacture bamboo pulp and paper from grass, to purchase the necessary machinery to be installed on the banks of the Godavari River where the company acquired 25 acres of land for the purpose. The company proposes to manufacture the Chemicals necessary for paper manufacture.

INDIAN TRADE COMMISSIONER IN EAST AFRICA.

To develop the trade of India with Kenya Colony, Uganda, and the Tanganyika Territory, the Indian Government have taken an important step in appointing Mr. C. G. Leftwich, C.B.E., as Indian Trade Commissioner at Mombasa. It is not easy to predict how far this appointment is likely to develop the trade of India with East Africa. Indian merchants feel that no Indian has been yet appointed Trade Commissioner and that the appointment of an Indian as Indian Trade Commissioner would considerably promote the interests of the Indian merchants in the devolopment of Indian trade with other countries. India is supplying 70 per cent of the unbleached cottons imported into East Africa. More enterprise on the part of the Indian merchants and manufacturers is urgently needed in view of the fact that representatives of Continental and American firms are now busy investigating trade opportunities at Nairobi, Kampala and Dar-es-Salaam. It is estimated that Kenya colony and Uganda require manufactured goods from overseas of the value of £ 2,600,000 per annum and the Tanganyika Territory imports goods worth £ 1,000,000 per annum. To fecilitate commerce, railways and harbours are under construction in Kenya. These colonies offer enormous opportunities for Indian enterprise in industry and commerce.

TATA INDUSTRIAL BANK. LTD.

The profit of the Tata Industrial Bank, Ltd., for the year ended 31st March 1922, including the amount brought forward, was Rs. 18,56,733-7-8, which the Directors appropriated as follows :—[a] In payment of an interim dividend of annas 10 per share free of incometax as on the 15th November, 1921, Rs. 6,32,279-6 ; [b] Provision for adjusting securities to, at or under market value, Rs. 1,70,019-10; [c] Transferred to Reserve Fund, Rs. 3,50,000; [d] Provision for Income Tax and Super Tax, Rs. 1,38,206-1 ; total Rs. 12,90,505-1. The Directors then recommended payment of a final dividend of annas 6 per share [making Re.1 for the year] free of incometax as on 1st June, 1922, Rs. 3,75,092-4 ; to carry forward, Rs. 1,91,136-2-8. Total Rs. 18,56,733-7-8.

CHARKA IN SCHOOLS.

The Bengal Council's decision to encourage the use of Charka in suitable schools affords an interesting study in contrast to the strange attitude of the non-brahman members of the "Justice" party to Mr. Vellingiri Goundar's resolution urging the encouragement of cottage industries in the Madras Presidency. While several members of the Bengal Council expressed surprise that the University representative smelt politics in the Charka, the discussion in the Madras Council on the Charka and the Handloom revealed either a woeful lack of technical knowledge or "the prudent propensity of seeing a bear in every bush."

Cobalt Magnet Steel.

A new formula for making magnet steel is coming into use, the principal change from the ordinary practice being the employment in its composition of cobalt instead of tungsten. Hitherto such steel has contained of about 5½ per cent. of tungsten, and the substitution of about 15 per cent. cobalt raises the coercive force of the material from 60 to 250, making it possible to use smaller magnets. The use of the new steel necessitates a new form of magnet, consisting merely of two small flat plates of steel placed on the sides of the armature, hence if it should come into general use the familiar horseshoe-shaped magnet will disappear. As yet, however, cobalt magnet steel is only in the experimental stage. Cobalt magnet steel costs three or four times as much as tungsten steel, but a much smaller magnet is required to do a given amount of work.

Technical Education Committee.

In accordance with an undertaking giving by the Minister of Development in the Legislative Council in November last the Governor has appointed a Committee consisting of twenty official and non-official members under the presidency of Mr. M. E. Couchman to enquire into and draw up a comprehensive scheme for an organised system of industrial and technical education to meet the present and reasonable future needs of the Presidency.

New Tramway Line in S. India.

The Madras Government have passed an order granting permission to the East India Distilleries and Sugar Factories, Ltd., (Messrs. Parry and Co., Managing Agents), to construct and maintain for public traffic a tram line between Tiruchendur and Tisayanvilai in the Tinnevelly district of the Madras Presidency.

The line besides tapping a rich sugar producing tract, will be a boon to the growing passenger and pilgrim traffic. It is understood that the line will shortly be completed, and will be available for public use directly after its inspection by the Government Inspector of Railways.

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VIZAGAPATAM PORT & HARBOUR.

For the last 50 years at least it has been acknowledged that Vizagapatam i the most favourably situated site along the 1,200 miles of surf beaten beach, between False Point and Adam's Bridge, for a real port and harbour; accessible and secure in all weathers; to take the place of the half dozen so-called "road stead ports" which dot the coast and try to do a sea trade across the Bay of Bengal with Burma, and with other ports up and down the shores of India and Arabia. Steamers have to lie off shore in these roadsteads one or more miles off the beach, with which the only means of communication, primitive, expensive, and risky, is the "Masula" surf boats. Considering the difficulties a very great amount of trade is carried on, but it has always been realised that a central secure harbour is a desideratum of the highest value, and now that there is a continuous line of railway along the coast between Calcutta and Madras, such a real harbour, accessible and safe at all times, would soon absorb the trade from the smaller "ports" on each side. Also there is to be built a railway from Vizagapatam to Raipur in the Central Provinces which will open up all that province, rich in wheat, minerals, and forest produce. Several designs for such a harbour have been got out and discussed without it becoming a very definite proposition, but some seven or eight years ago, Mr. Lyster, the wellknown Port Engineer, was got out to prepare a design, and succeeded in evolving a plan for docks in the huge area of "marsh" behind the ridge on which Vizagapatam is situated, with an approach channel, dredged to give 30 feet of water at lowest side level, leading to docks of the same depth which will be accessible at all times and secure in all weathers.

The war stopped the construction of the railway to Rajpur, and all plans for proceeding with the harbour work were postponed, but the energy of the chairman of the Bengal-Nagpur Railway Company, has succeeded in overcoming immense difficulties, and we have now come to the stage where a large area of land has been "acquired," and a distinguished officer, Col. Cartwright-Reid, C.B., has arrived and taken up his duties as Chief Engineer of the Port works. Many difficulties remain to be overcome before work on the docks and the Raipur Railway can be begun in earnest, but the scheme is in the hands of the one man who at Simla "*got things done*" and we ought soon to hear of great works in full swing on the most up-to-date lines, which will be noted and watched with great interest by all who take an interest in their profession.

It would be premature to say much about the details of the Lyster design which is liable to some modifications, but the general idea of a dredged 30 feet deep approach-channel, leading to docks with a minimum 30 feet depth of water, provided with the most modern equipment, in a sheltered position accessible and safe in all weathers, will not be departed from. By the utilisation of the modern gigantic suction dredger, for the use of which the soil and circumstances are especially favourable, the work will be carried out very cheaply and quickly, and the absence of lock gates or heavy pumping apparatus such as are required at the Kidderpore docks, will give Vizagapatam an advantage in cheaper port dues which, combined with the saving of the long Hooghly approach, may make it a serious rival to Calcutta itself. (*Indian & Eastern Engineer*).

ENGINEERING.

The Railway Situation.

A correspondent writes to the *Indian and Eastern Engineer*:—

THE subject of outsanding interest to all Engineers in India, as well as specially to the railway men, is the result of the Acworth "Committee of Enquiry into the finances and management of Indian Railways." The report of this very strong practical committee is now "under consideration of the Government of India," and, apparently, in the melting-pot on its way to the scrapheap. It will be a thousand pities if this should be the fate of the most searching enquiry ever made by the most able and experienced men of the highest authority in Indian railway matters, who have drawn up one of the most lucid and convincing Reports ever contained in a blue book. The Committee have proved to the hilt the present disastrous nature of the situation, in which the railways are bankrupt and inefficient beyond belief, unable to carry more than a small proportion of the traffic offered, and so handicapped by the neglect of seven years of replacements and renewals, that there can be no improvement without the expenditure of vast sums of money difficult to obtain and still more difficult to spend usefully, quickly enough to bring urgent requirements up to date.

Besides the insufficient equipment which makes it impossible to carry the traffic offered there are shown to be appalling losses, and damage done to the goods accepted for transit, owing to insufficient shed accommodation and a scandalous amount of robbery and pilferage for which the railways evade responsibility by the iniquitous "owners' risk" system, and where evasion is impossible delay the settlement of claims for months and years. Numerous other defects are proved resulting in a heavy tax on trade and serious hampering of all industrial and commercial enterprise.

The Committee also prove to the hilt that the *origo mali*, the root of all evil, is the calamitous "paralysing control" of the Financial Department, which has "no conception of the needs of a vast commercial concern that must be managed on business lines to be successful," and by "starving the Railways of the funds necessary for the most urgent needs" while seizing their net profits, to mix up with the general revenues of the country, and insisting on the incredibly stupid and wasteful "lapse" system which has brought things to the present impasse.

For any real reform, the Committee lays down that *the essential preliminary is the entire separation of Railway finance from the general revenues of the country, and its relief from the "paralysing control of the Financial Department."* All the expert Railway witnesses agreed on this point and the Associated Chambers of Commerce of India and Ceylon passed a Resolution to that effect in January 1921. To those who do not know India it will be quite incredible that all this consensus of opinion of the highest authorities on the subject is being treated with absolute contempt by the invincible monster which the Frankenstein Government of India has created in the shape of its Financial Department.

A "Financial Enquiry Committee" appointed to report on *how* the Financial proposals of the Acworth Committee can be carried out, presided over by the worthy and amiable head of the Department (the "accused" and proved culprits in the case), *has decided that they cannot be carried out at all!* If this preposterous decision is allowed to stand; as it will be unless there is an overwhelming storm of protest from the public and the great commercial and industrial interests affected, the position will be quite hopeless and no effectual reform can be expected in our time. There is to be another committee to enquire into the remaining recommendations of the Acworth Committee but it is locking the stable door after the steed is stolen.

RAILWAYS.

Racial Preference.

THERE has been much agitation all over India for the past many years against the policy of racial preference in the railway administrations of India. Some have fought against it in the legislative councils, while others agitate outside—in the Press and from the platform. Some of the agitators have been visited with official displeasure from time to time and fined or imprisoned under section 153A of the Indian Penal Code, but those in authority still remain unmoved by these agitations constitutional or otherwise. And even several judges of certain high courts in India, which are supposed to be independent, have pronounced that a railway company has a right to reserve carriages or compartments for certain class or community of passengers. Some of them have gone so far as to assert that the policy of reserving special compartments for "Europeans" is for the good of the coloured passengers rather than for that of the whites. If the learned judge's pronouncement could be taken seriously, it is regrettable that the judge has not seen what a "European" third-class compartment is. What is worse is that when the coloured unfortunates are elbowing one another for a standing space in their carriages like so many flocks of sheep and goats—a common expression—the heaven-born ones of the "European" third-class, are given enough room to sleep or sit at ease as if in their own homes. If one would take the trouble of looking into a fast-running railway train at the Rangoon station one would find that the description given above is no exaggeration at all. And it is incomprehensible how the government has allowed the company to carry passengers, especially in fast-running trains, in excess of the number marked on the carriages. If the figures on the carriages do not signify anything, surely they should not have been written at all. At any rate the policy of treating coloured peoples as so many flocks of sheep and goats and the trouser-wearing class as rare specimens of humanity is altogether untenable and the sooner it is thrown overboard, the better it would be for the peace and happiness of the subject races.

It is an admitted fact that the railways derive the chief source of income from the coloured third class passengers, yet it keeps them as goats and sheep; when the minority enjoy racial privileges, it amounts to committing an unpardonable sin against humanity. The people are, no doubt, inarticulate poor and helpless, but this is no ground why they should be allowed to suffer for their ignorance and helplessness since they pay the same amount of fare to the railway owners.

To speak the truth, the railways are not absolutely owned by the white capitalists of the United Kingdom, but they have been built with the people's money collected in Burma and India and to allow

the white monopolists a free hand in this public concern ignoring the ordinary comforts and convenience of the coloured folk is to say the least indefensible.

(*New Burma*).

TECHNICAL EDUCATION

In connection with the above subject, it is regrettable that the idea of sending scholars to foreign countries has fallen through or at least has not impressed upon the Advisory Committee as it should. No doubt, there would be established at no distant date an agricultural college in the country, but it may be doubted if agriculture is the be-all and end-all of Burma. Is it the avowed policy of the British government, to keep Burma as a purely agricultural country from where only raw materials must be exported to Great Britain for the benefit of British industrialists alone? If that is so, it would be a dog-in-the-manger policy which deserves the severest condemnation from every quarter. If that is so, the idea of British Commonwealth whose every member would be treated on the same status—both economic and political—should be tabooed. If that is not so, there is every force and argument that scholars should be sent out to foreign countries to study the various modern industries of the world. Japan has sent out hundreds a year while the Philippines fifty or sixty at a time. Would Sir Reginald Craddock do that? Let us "wait and see." (*New Burma*.)

FRUIT SYRUPS

To keep fruit syrups, bottle hot, preventing access of air. This principle is observed variously—e. g., put syrup while hot in warmed quart bottles, and almost fill them. Cork the bottles until the syrup cools and contract in volume; then, having heated a small quantity of the syrup, fill the bottles, cork them securely, and wax them. The preservation of syrups, as well as all saccharin solutions, is best promoted by keeping them in a moderately cool, but not very cold, place. Let syrups be kept in vessels well closed, and in a situation where the temperature never rises above 55 degs, Fahr. They are kept better in small than in large vessels, as obviously the longer the bottle lasts, the more frequently will it be opened and the syrup exposed to the air.

(*Australian Brewing and wine Journal*).

BANK SAFES.

The newest type of bank safes are both fireproof and burglar-proof. The walls, and ceiling consist of great masses of concrete to which are embedded steel rods. Should a burglar undertake the task of boring through one of these walls, the hard steel breaks his heart by breaking his drills one after another! Not a scrap of wood is used, every fitting—even the door and window frames—being of thin steel. There is nothing in the room that catches fire. Besides the huge locks that open with a key, the doors of the safes have an automatic fastenning regulated by a clock. When he closes the room for the night the manager shoots a second set of bolts. Then he sets the controlling clerk to open them at a certain hour the next day. Once the door has been unlocked in great mass, weighing four or five tons, can be pushed open with a finger, so delicately is it balanced upon its hinges.

TANNING IN CHINA.

Improvements Expected as Result of University Course.

With the establishment of a University course in Peking, says a correspondent, improvements in tanning in China may be expected in the near future. As it is, the process is extremely primitive. Taking the methods employed by the Chang Hsia cow hide tannery, Kalgan, as an example, the hides, after preliminary cleaning, are first steeped in a tank containing lime water. Each tank has a capacity for forty or fifty pieces of skin, and for each piece three catties of lime are required.

After the skin has remained in the tank for about ten days, it is taken out for further treatment. When the hair on one side of the skin and the remaining bits of flesh and oily matter on the other have been removed, the hide is kept in a wooden tank, which contains a solution of the sap of the mangrove tree, for forty or fifty days, during which time the contents are frequently stirred and turned over.

The hide is then taken out, washed, and put under a drying press to squeeze out the water. When partially dried, it is coated with a mixture of pea-nut and jute oil. In coating the hide, about one catty of oil is required for each piece. After further drying, designs are printed on the finished leather which is then ready for market.

Three months are spent in the operation of tanning a hide, and each piece in its finished condition measures about 8 feet in length and 4½ feet wide. It is sold at prices ranging around ten taels to local boot and shoe makers for making Mongolian footwear. (*Shoe and Leather Record*).

BLEACHING POWDER

The yearly demand for bleaching powder in China amounts to between 8,000,000 lbs. and 10,000,000 lbs. a large portion of which is employed for whitening cotton yarns and cotton fabrics, the production of which in that country is rapidly developing. Raw cotton is grown extensively in the whole of South China which is becoming one of the most important cotton producing countries in the world. Seeing this, not a few Japanese spinning mills have been established in Shanghai, Hankow and some other important places. There are even Chinese towels and hosiery goods cheap and fine in quality, which are exported to Japan instead of getting them from Japan as previously: In the conditions, the Chinese demand for bleaching powder is increasing greatly, which will keep up the production of it in Japan as much as at present for a time to come at least. (*Yakugyo Shuho*.)

KHADDAR.

The members of the Local Bar Library passed the following resolution:—

Resolved that as a mark of homage and respect to Mahatma Gandhi the greatest living man of the world—the true apostle of peace and freedom—a man of saintly and noble character—who has been convicted and imprisoned recently, this association calls upon all the members henceforward to wear Khaddar as far as practicable and to encourage the use of Khaddar in accordance with the earnest wish of Mahatma which would help to remove the poverty of the masses and would ameliorate the economic conditions of the country.

EXPORTS OF RICE.

We do not know what is in store for the country in the current year. There has been no rain for the last 7 months and the first ploughing up of the fields has not yet been taken in hand. We are told that free exportation of rice is going on throughout Orissa and especially at Puri. The difficulties of getting suitable truck arrangement possibly stand in the way of a long in-land transport. So, merchants and whole-sale traders and their agents are buying up paddy throughout Orissa and sending them to Puri by rail, where they are taken to steamers by boat. Within the last fortnight as many as 30,000 bags of rice went abroad via Puri and more bags are coming in every day. Will nothing be done to prevent free exportation? (*Oriya*).

HOW TO IMPROVE MATCH TRADE.

Japan's match industry and trade are in a very inactive state. The Government authorities have considersd means to improve the conditions and have found it possible to better the export trade in a measure, when there can be a suitable way taken for cheapening the cost, while quality is improved, although any complete recovery of the situation cannot be hoped before a thorough revival of the existing world's tradal conditions. This suitable way is considered by the authorities concerned to be to reduce the cost of production, to commonly purchase the raw material at a cheaper price than at present, to lower the freight rate on export matches as much as possible, to more strictly control over defective making, to grant more financial facilities to the manufacturers and to combine the existing petty works.

(*Yokugyo Shuho*.)

SCIENTIFIC TRAINING IN BUSINESS.

Addressing the Liverpool and North-Western Section of the Institute of Chemistry on April 6, Mr. W. Hulme Lever drew attention to the value of a scientific training for business men. Men who could think scientifically were badly needed, and in his experience the most successful partnerships had been those between purely scientific men and purely commercial men. On an ideal board of directors there should be at least one scientific brain, one legal brain, and one accountancy brain, all being bound together by what was known as a commercial man. It was the business man, apart from the specialist, who guided the destiny of the commerce and industry of this country, and there was no better training for a business man than a scientific education. The most obvious of its recommendations were that science sought simplification and standardisation, both of which were much needed in commerce. Mr. Lever instanced the metric system, which he was convinced, must be adopted in this country if we were to make real progress and bring the industries of the different countries more into harmony. It was necessary also that we should have some measurement whereby volume might be converted easily into weight instead of, as at present, weight having no direct connexion with volume at all. Science made men seek for truth. The history of science was one long pilgrimage in the search for truth. A business man should tackle his problems with the one object of arriving at the true facts. Finally, science produced humility; that seemed to follow naturally on the scientist's desire for truth. Some business people seemed to think that our industries were never so wonderful as they were to-day, and that they, and those at the head of them, could not be improved upon. Such people ought to take a leaf out of the book of the scientist, and learn that the realms not conquered were far greater than the realms which were conquered. Business men must realise that there was still a very great deal to be achieved that was not represented by the profit on a balance-sheet.

Chemical Age.

ENGINEERING

(From the Practical Engineer)

Composition of Protective Paint.

Painting is the most common method for protecting iron and steel work from corrosion. A satisfactory paint must exhibit elastic properties and not deteriorate owing to the expansion and contraction of the metal under temperature changes. A good test of elasticity and strength is to apply a film of paint to a thin metal sheet, which latter is afterwards dissolved away by acid. The paint should remain as a non-porous tough skin. A bad paint may be too brittle and crack in consequence. When this happens corrosion will not occur at the cracks only, but will spread elsewhere beneath the paint. Especially will this be the case if the adhesive property of the paint is poor. The two essential ingredients of a paint are the substance providing the elastic protective film, usually linseed oil so treated as to exhibit drying properties, and the pigment whose function is not merely to provide a colour but to assist in retaining the film of moderate thickness on the surface of the metal and prevent it from flowing away before drying. Exposure and catalytic action induce the drying of the oil film. A form of oxidation takes place, acounting for an appreciable incrsase in weight after the paint is applied. Of the three pigments, red oxide of lead, red lead,or yellow chrome, generally used as a first coat, the second has been most extensively employed in the past. Unfortunately it has many disadvantages, as, for instance, its liability to harbour impurities which may have corrosive effects. Red lead is also liable to crack when subjected to temperature variations, and it does not combine with what is probably the most suitable proportion of oil. Red lead paints require much mixing, as owing to high specific gravity of the pigment it soon settles. The disadvantage of using red iron oxide is its liability to carry oxygen to the iron and so induce corrosion. For a first coat one cannot do better than use orange lead, a form of lead chromate, which has a comparatively low specific gravity, carries no oxygen, and possesses lasting properties. Another pigment largely used in the painting of steel structures is the natural iron compound known as micaceous iron ore which imparts a tough elastic film which does not chip off easily.

A Cancelled Export Order.

A quantity of steel sheets was ordered in England by a firm abroad. Before the date appointed for shipment a financial crisis in the country of destination resulted in the manufacturers receiving a notification to the effect that the goods could not be taken up and a request to sell them elsewhere at the highest price they could. This the manufacturers did, and then claimed the difference between the sum realised and the original quotation. But the firm who placed the order in the first place would not recognise such a demand, and, in consequence, the manufacturers took legal action on the ground that, the goods being refused, they were legally entitled to sell them in the open market for what they would fetch. When the matter came before the Court the point raised was not whether they were entitled to sell the goods, but whether a fair price had been obtained. The judge said that the Court was satisfied on this point, and gave judgment for the manufacturers, with costs.

TIMBER.

In a paper, written by Mr. Alexander Howard the well-known authority on timber, it is stated that the majority of Indian timbers likely to be appreciated by consumers in Europe were obtainable at prices far below their intrinsic value, because the timbers most esteemed by local inhabitants often proved to be the least valuable for export, while timbers which were of little use in the country of their origin were not seldom of great importance elsewhere.

There were 251,000 square miles of forest in India and Burma, and it was only by Gevernment initiation and exploitation that the timber could be brought into common use. Our hidebound repetition of the use of oak, mahogany and walnut had become almost ludicrous in face of the wide choice now available.

CHEAPER WHEAT.

Reports have reached us from Lyallpur that wheat has dropped to Rs. 6-2 per maund. This is remarkable considering that Rs. 10 were charged at the beginning of the year. The Punjab wheat crops are, on the whole, in a very favourable condition and it is not at all unlikely that a further decline in prices may take place at an early date which is sure to have a beneficial effect on the prices of other foodstuffs and will, in a measure, tend to allay unrest in the Province. We would like to know that the high rates now prevailing in other parts of India are experiencing a similar fall, for disproportionate dearness in the prices of the necessaries of life is always to be deprecated.—*(Eastern Mail.)*

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